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APPARATUS FOR TEACHING ARITHMETIC OBJECTIVELY

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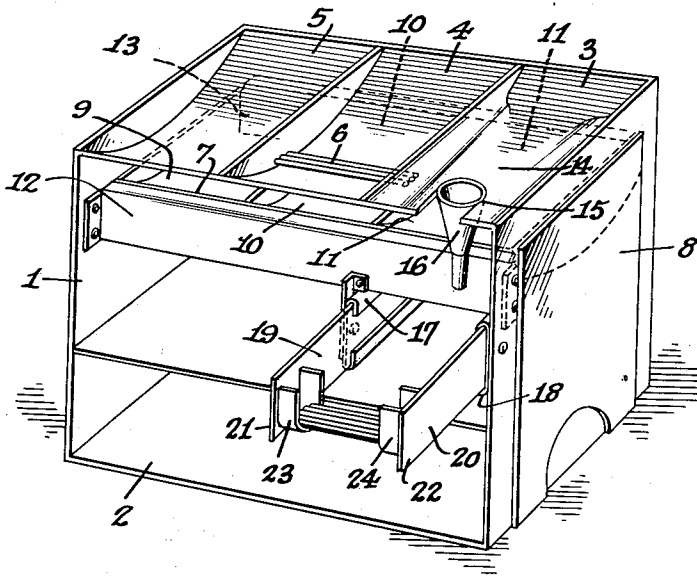


Fig. 1.

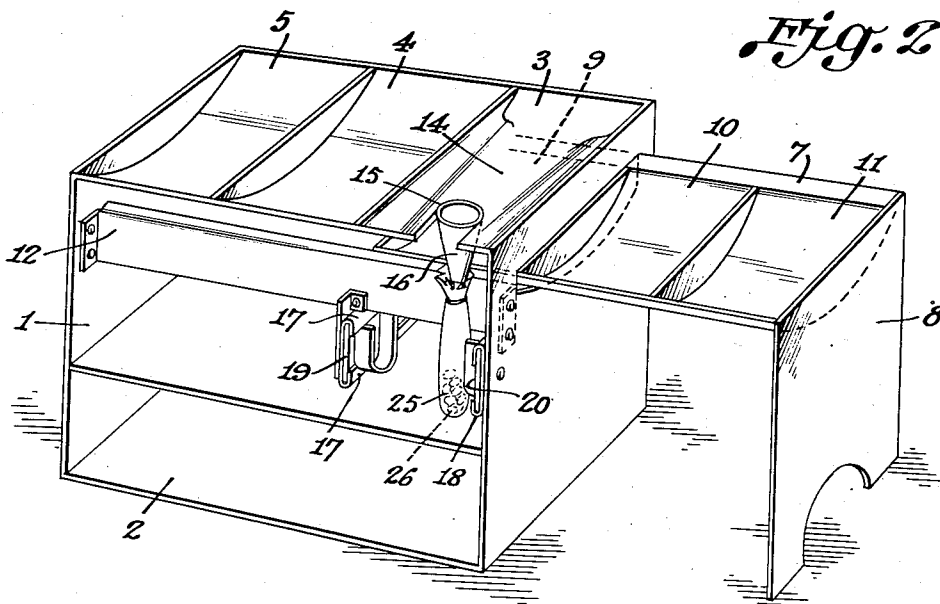


Fig. 2.

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APPARATUS FOR TEACHING ARITHMETIC
OBJECTIVELY

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2 Claims. (Cl. 35—2)

The object of the present invention is to provide a box for counters of various kinds used in teaching arithmetic objectively, which box is adapted, not only to store the articles when not in use, but also to render them easy to pick up and manipulate by the user. These and other advantages and capabilities of the device will become apparent from the description and drawing, wherein—

Figure 1 represents an isometric view of an embodiment of the device showing front, top and right end with drawer pushed in and containers extended; and Figure 2 shows a similar view with containers pushed in, drawer extended and funnel and sack attached.

Similar numerals refer to similar parts in the views.

The box 1, forming the object of the invention, is a small case having substantially open front 2 and having, as shown, three or more shallow compartments in the top, numbered 3, 4, 5, etc., respectively, arranged side by side from right to left and extending entirely across the top from the open front to the back.

The floor of each compartment 4, 5, etc., slopes slightly downward from the rear to a point near the front side, and then upwardly, so that the compartment is deeper at the front side than at the back. The purposes of this shape is to cause any counters, such as match sticks 6, which may be placed in such compartments, to roll forwardly, where, owing to the slight elevation of the floor at the front, the user, a child, can easily reach over the edge and seize a counter as the box is standing on a desk or table. The upwardly turned front edge will tend to prevent the counters from rolling out even though they may be stacked in the compartment to a considerable height. The floor of compartment 3 will be described later.

Beneath the floor of these three or more compartments, and carried by suitable guide ways 12 and 13 fastened respectively adjacent the front and rear of the box, and parallel to each other and to the floor of the box and at the same height from the bottom of the box, is a drawer 7 supported, when drawn out, by a foot 8, and which foot, when the drawer is pushed in, lies close to the end of the box. The drawer has compartments 9, 10, 11 etc. from left to right similar to compartments 4, 5 etc., and for similar purposes. The drawer is of less width than the top of the box, for a purpose to be disclosed. In the preferred form the front and rear sides of the compartments 9, 10, 11 etc. are of the same height

and the lowest part of the compartments is midway from front to back. Since the user does not have to raise his hands so high to reach these compartments and since the compartments are not so far across from front to back as those first mentioned, the user can easily reach the counters, and the compartments will hold more counters than they would if provided with a low front wall. It is, however, within the scope of my invention to have compartments 9, 10, 11 etc., of the same general shape as compartments 4, 5 etc., or like 3.

Compartment 3 will now be described. This compartment has the bottom shaped to form a channel 14, wide at the rear side and narrower at the front and there terminating in an aperture 15, of a size to support a small funnel 16, with upper edge aligned with the floor and the small end extending downwardly in front of the guide 12 which supports the front edge of the drawer 7. This drawer, as above noted, is narrower than the top of the box, allowing thus, the front edge of the drawer to be offset from the front of the box to give room for the funnel which therefore will not interfere with the opening and closing of the drawer. The sides of the channel form supporting skids for sticks 6.

Carried by other guides, 17 and 18, which are fastened to guides 12 and 13, are forwardly directed slides 19 and 20, respectively, the guides and slides being placed low enough to preclude their interfering with the movement of the drawer 7. The two slides, 19 and 20, respectively are of similar construction except that one is made to face one way and the other in the opposite direction. A description of one will therefore suffice. Each slide is composed of a long straight narrow strip 21 or 22 respectively adapted to fit snugly into ways made by turning over edge portions of the members 17 and 18, respectively, after the manner of well known extensible curtain rods. At the outer end of each such strip, towards the user, are placed containers 23 and 24 respectively each in form of longitudinal half of a hollow cylinder, with one end fastened, as by soldering, to its respective strip, with opening directed upwardly. These receptacles are so proportioned that when the slides are in place with receptacles opening upwardly and extending towards each other a substantial space, for instance an inch is left between them, for a purpose to be set forth.

Numerals 25 indicates a cloth sack fastened preferably with an elastic band over the small downwardly directed end of funnel 15, and 26 indicates beans or the like in the sack.

In the use of the device, counters are placed

in the compartment 3 from whence they may be taken and bound into bundles as described below and placed in compartment 4 or otherwise manipulated in a manner well known in the art of teaching numbers. If more extensive manipulation is desired the drawer 7 can be pulled out and its compartments used in a well known manner. If it is desired to group the counters, as into tens, the slides 19 and 20 are pulled out and sticks 6 supported at their ends in the two receptacles 23 and 24 where they may be bound preferably with elastic bands into bundles and lifted out very conveniently because of the space between the containers 23 and 24. The bundles will easily be given a round shape or any shape according to the shape of the containers 23 and 24.

While the compartment 3 can be used for sticks, such as shown at 6, it is especially adapted to the use of counters such as beans 26, which can be moved along the channel 14 and dropped through the funnel 15. If desired, the sack 25 may be placed over the small end of the funnel and the counters run into it in desired number, for example, ten. The filled sacks can be withdrawn, mouth or opening closed preferably with the elastic band and another put on. The filled sacks can be used in ways well known to teachers of elementary arithmetic.

The various counters may be stored in the box when not in use.

Other counters than those described may be used with my device, and various changes may be made in the structure shown, such for example as having more or less compartments, provided the changes do not depart from the spirit and scope of the appended claims.

I claim:

1. In a device used for teaching mathematics a box for holding counters, said box having on the upper side thereof open compartments arranged side by side with the bottoms of said compartments sloping downwardly slightly from rear to front, whereby to facilitate laying counters in the compartments or taking them out, one of said compartments having a spout leading downwardly in front of the drawer 7, and adapted to receive the open end of a sack into which counters placed in said compartment, may be dropped through the spout, said compartment having forwardly and downwardly directed skids upon which small counters in the form of sticks may be laid and readily removed.

2. In a device as claimed in claim 1, a pair of upwardly turned hooks on the front of said box wherein counters in the form of sticks may be laid for convenience in binding up into bundles.

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